

STE	STEMWALL FOOTING SCHEDULE								
	E	ЗТН	H	RAGE	REINFORCEMENT D	IAMETER AND COUNT			
CODE	Laiw	LENG	DEP'	SOIL	SHORT WAY	LONG WAY	ADDITIONAL REQUIREMENTS		
CF-24	24"	-	12"	12"	# 4's @ 16" O/C BOTTOM	(3) # 5's BOTTOM	-		
CF-60	60"	-	12"	12"	# 5's @ 12" O/C BOTTOM	(6) # 5's BOTTOM	-		
PAD	PAD FOOTING SCHEDULE								
	TH	GTH TH	TH	RAGE	REINFORCEMENT DIAMETER AND COUNT				
CODE	DIN		DEP	SOIL	SHORT WAY	LONG WAY	ADDITIONAL REQUIREMENTS		
P34	3'	4'	12"	12"	(5) # 5's BOTTOM	(4) # 5's BOTTOM	-		
P58	5'	8'	12"	12"	(6) # 5's BOTTOM	(6) # 5's BOTTOM	-		



- DRILL & EPOXY 3#7 TOP AND BOT x16" LONG,6" INTO EXISTING FOOTING

LO	ADIN	G THIS LEVEL		
FIRST FL	OOR - INTE	RIOR (138 PSF)		
DE	AD (77 PSF)	FLOOR SELF WEIGHT= 50 PSF FLOOR FINISHES = 27 PSF		
LIV	E (55 PSF)	OCCUPANCY = 40 PSF PARTITIONS:ASCE7-10: 4.3.2 = 15 PSF		
FIRST FL	OOR - EXTE	ERIOR (177 PSF)		
DE	AD (77 PSF)	FLOOR SELF WEIGHT= 50 PSF FLOOR FINISHES = 27 PSF		
LIV	E (100 PSF)	OCCUPANCY = 100 PSF		
CON	CRETE	& CMU COLUMN SCHEDULE		
COOR ARCH	DINATE CO	LUMN EDGE LOCATION WITH THE S AND WITH THE DOOR/WINDOW SUPPLIER		
M5 M7	5	8"x8" FORMED COL. OR CMU COL. w/ (1) # 5 REINF. BAR (30" LAPS) w/ (1) # 7 REINF. BAR (42" LAPS) SEE FNDN & FRMNG PLAN FOR LOCATIONS FILL w/ GROUT - SEE STRUCTURAL NOTES.		
C812		8"x12" POURED CONC. COL. w/ (4) #5's VERT. w/ #3 TIES @ 8" O/C		
C816		8"x16" POURED CONC. COL. w/ (4) #6's VERT. w/ #3 TIES @ 8" O/C		

SEE DETAIL 1/S4



DRILL & EPOXY				
3#7 TOP AND BOT				
x16" LONG,6" INTO				
EXISTING FOOTING				



SYMBOL LEGEND							
SYMBOL	DESCRIPTION						
4@6B-INNER — 7 4@6T-INNER 7 / 4@6T-OUTER // 4@6B-OUTER	STEEL REINFORCEMENT LEGEND: -4@6: #4's @ 6" O/C -B: BOTTOM -T: TOP -OUTER: OUTERMOST LAYER -INNER: INNERMOST LAYER -TEMP: TEMPERATURE AND SHRINKAGE REINF.						
3 S1	SECTION MARK - DETAIL NUMBER / SHEET NUMBER						
\succ	ROOF RIDGE LINES						
4"	FLOOR STEP						
<u>(SC1)</u>	STEEL COLUMN ABOVE FLOOR LEVEL						
(SC1)	STEEL COLUMN BELOW FLOOR LEVEL						
	STEEL COLUMN ABOVE AND BELOW FLOOR LEVEL						
P1	CONCRETE PAD FOOTING - SEE FOOTING SCHEDULE						
$\underline{\land}$	REVISION NUMBER - SEE TITLE BLOCK FOR DATE						
\bigcirc	REVISION CLOUD						
ABOVE BELOW O	STEEL COLUMN						
ABOVE BELOW	CONCRETE COLUMN - SEE CONC. COL SCHED.						
	FILLED CELL - SEE CONC. COL. SCHED.						
	CMU WALL CURRENT LEVEL						
	CMU WALL ONE LEVEL BELOW						
	EXISTING STRUCTURE						
	SOIL						
	NEW CONCRETE SLAB						
	NEW CONCRETE BEAM						
	NEW CONCRETE FOOTING						
YP.) 3/16 V4	WELD SYMBOLS						
ano 0101 ↓ 1008 ↓ 122-6°	TIE BEAM TRANSITION SYMBOLS						
FF+0'-0"	ELEVATION MARKER - SEE ARCH PLANS FOR +0'-0"						
+55.06 -88.88	WIND PRESSURES ON OPENINGS (GIVEN IN PSF)						
•	CONCRETE WALL VERTICAL REINFORCEMENT. SEE FOUNDATION / FRAMING PLANS FOR LOCATIONS						
	THICK DASHED LINE REPRESENTS OPENING ON STORY BELOW REINFORCED MASONRY WALL						
B840, T@14'-0"	CONCRETE BEAM, 8" WIDE x 40" DEEP, TOP @ +14'-0" SEE BEAM SECTION OR PROFILE FOR REINFORCEMENT						







STRUCTURAL NOTES

GENERAL

ALL INFORMATION THAT IS STRUCTURAL IN NATURE SHOWN IN THESE STRUCTURAL SHEETS SHALL TAKE PRECEDENCE OVER STRUCTURAL ITEMS IN OTHER TRADES' PLANS . EXCEPTION: NOTES IN OTHER TRADES' PLANS ADDRESSING SPECIAL ITEMS (SUCH AS MINIMUM CONCRETE STRENGTH FOR FIRE RATING) SHALL GOVERN WHEN MORE STRINGENT THAN HERE SHOWN.

REQUEST FOR INFORMATION

PLEASE USE <u>HAND SKETCHES AND OTHER VISUAL/WRITTEN METHODS</u> TO COMMUNICATE A CONSTRUCTION QUESTION. SEND TO US VIA EMAIL OR FAX.

CONTRACTING NOTES

- GENERAL CONTRACTOR MUST FAMILIARIZE HIMSELF WITH THE STRUCTURAL PLANS AND HOW THEY INTERACT WITH OTHER SPECIALTIES PLANS (ARCHITECTURAL, M.E.P., ETC). ALTHOUGH TRADE COORDINATION HAS BEEN PERFORMED, THIS OFFICE SHALL BE CONTACTED IMMEDIATELY IN CASE THE CONTRACTOR FINDS ANY MISSING, AMBIGUOUS, UNCLEAR OR CONFLICTING INFORMATION. THE CONTRACTOR SHALL ALWAYS KEEP ON SITE THE LATEST REVISION OF THE SIGNED AND SEALED
- STRUCTURAL PLANS, APPROVED SHOP DRAWINGS AND PRODUCT APPROVALS. ALL OPENINGS BELOW 60'-0" TO BE PROTECTED FROM IMPACT OF WINDBOURNE DEBRIS
- GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL ACTIVITIES RELATED TO WORK SAFETY.
- CONSTRUCTION LOADS SHOULD BE CAREFULLY DISTRIBUTED TO AVOID LOADING ANY MEMBERS IN EXCESS OF THEIR CAPACITY. THE APPROVAL BY THE STRUCTURAL INSPECTOR OF ANY WORK DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE FLORIDA BUILDING CODE AND THE APPROVED STRUCTURAL PLANS.

PROJECT SPECIFIC CODES USED:

ALL STRUCTURAL ELEMENTS FOR THIS PROJECT HAVE BEEN DESIGNED PER ELORIDA BUILDING CODE 2014 THIS IMPLIES THE USE OF THE BELOW LISTED CODES (FBC TAKES PRECEDENCE OVER CONFLICTING ITEMS). PROJECT PLANS, DETAILS & ARCHITECTURAL BACKGROUNDS

ALL DETAILS AND SECTIONS SHOWN ARE INTENDED TO BE TYPICAL UNLESS OTHERWISE SPECIFIED. DETAILS THAT REFERENCE SPECIFIC SCHEDULES ARE INTENDED TO BE SCHEDULES SHALL TAKE PRECEDENCE IN ALL CONFLICTING ITEMS ALL ELEMENTS INTENDED TO ORIGINATE FROM OTHER TRADE'S DRAWINGS (ELEVATIONS, PARTITION LOCATIONS, ETC) HAVE BEEN INCLUDED FOR THEIR RELATION TO STRUCTURAL ITEMS ONLY. REFER TO THE CORRESPONDING TRADE'S PLANS FOR FINAL LAYOUTS AND DETAILS. DO NOT USA A SCALE TO DETERMINE THE DIMENSIONS OF ANY PLAN OR DETAIL DRAWINGS. IF THE DIMENSION NEEDED IS UNAVAILABLE, PLEASE CONTACT THIS OFFICE.

GRAVITY LOADING (ASCE 7-10, CHAPTER, TABLE C3-1 & C3-2) SEE GRAVITY LOADING CHART FOR DESIGN LOADS.

WIND LOADING (ASCE 7-10)

WIND SPEED=170 MPH (3 SECOND GUST) EXPOSURE = C

BUILDING TYPE= ENCLOSED, RIGID MRH= 15.80'

STRUCTURE CATEGORY = II

KD=0.85 - EITHER ASD OR LRFD LOAD COMBINATIONS PER ASCE7-10 HAVE BEEN USED FOR DESIGNING THE VARIOUS STRUCTURAL ELEMENTS IN THIS PROJECT. INTERNAL PRESSURE COEFFICIENT= +/- 0.18

COMPONENTS & CLADDING DESIGN WIND PRESSURES:

WALLS: +16'-0" ZONE 4 = +30.18 PSF, -31.10 PSF

ZONE 5 = +30.18 PSF, -37.00 PSF

ROOF: SEE ROOF WIND ZONE PRESSURE DIAGRAM FOR ZONE LAYOUT, SIZE AND PRESSURE.

DEFLECTION DESIGN CRITERIA

ALL MEMBERS (BEAMS, SLABS, TRUSSES, JOISTS, ETC) COMPOSING FLOORS HAVE BEEN DESIGNED AND SHALL BE DESIGNED BY THE DELEGATED ENGINEER (IF APPLICABLE) FOR: TOTAL LOAD: SPAN / 240

- REINFORCED CONCRETE ELEMENTS: LIVE LOAD + LONG TERM SPAN / 360 WALL / MULLIONS: L / 175
- OTHER ELEMENTS: LIVE LOAD: SPAN / 480 ROOF MEMBERS SUPPORTING NON PLASTER CEILINGS: LIVE: L/240, TOTAL: L/180 PER FBC TABLE 1604.3

SHALLOW FOUNDATION (SOIL PRESSURE: ASD, FOOTING DESIGN: LRFD)

BOTTOM OF FOOTINGS TO BEAR ON SOIL CAPABLE OF SAFELY SUPPORTING 2,500 PSF. SITE PREPARATION (ANY DE-MUCKING, DE-WATERING, PRE-CONSOLIDATION, COMPACTION, PRESCRIBED TESTING OR ANY OTHER PROCEDURE, PRECAUTION OR RECOMMENDATION, AS OUTLINED IN THE SOILS REPORT) TO BE PERFORMED PER SOILS AND SUBSURFACE INVESTIGATION:

NUTTING ENGINEERS OF FLORIDA, INC. ORDEN NO. 11957.23 (MAY 2016)

TOP OF EXTERIOR FOOTINGS SHALL BE MINIMUM 12" BELOW FINISHED GRADI PRECAUTIONS TO BE TAKEN PRIOR TO EXCAVATING BESIDE OR UNDERNEATH EXISTING STRUCTURES.

WHERE ADJACENT TO RETAINING WALLS OR POOL WALLS, BASE OF FOOTINGS SHALL BE DEEP ENOUGH AS TO BE LEVEL WITH THE FOOTING/BASE OF THE ADJACENT RETAINING WALL/POOL. ALL ISOLATED FOOTINGS ARE INTENDED TO BE CENTERED WITH THE COLUMN THEY SUPPORT, U.N.O.

THE SOILS ENGINEER SHALL BE RETAINED BY THE CONTRACTOR TO SUPERVISE, INSPECT, VERIFY AND/OR CORRECT ANY SOILS CONDITIONS NECESSARY TO ACHIEVE THE SUPPORT OF THE PROPOSED STRUCTURE THE CONTRACTOR SHALL DE-WATER THE SITE FOR FOOTING CONCRETE TO BE PLACED AGAINST DRY SOIL.

VIBRATORY COMPACTION EQUIPMENT WILL CAUSE VIBRATIONS THAT WILL TRAVEL TO NEIGHBORING PROPERTIES AND CAUSE DAMAGE AND DISRUPTION. VIBRATION LEVELS SHALL BE MONITORED DURING OPERATIONS TO GUARANTEE A MAXIMUM WILL NOT BE EXCEEDED DEPENDING ON THE SENSITIVITY OF ADJACENT PROPERTIES. THE CONTRACTOR SHALL CONSIDER PERFORMING A CONDITION SURVEY OF ADJACENT PROPERTIES BEFORE AND AFTER COMPACTION OPERATIONS IN CASE DAMAGES OCCUR THAT WILL NEED TO BE REPAIRED.

3000 PSI CONCRETE (ACI 318-11, 315-08, LRFD)

READY MIX CONCRETE TO ACHIEVE A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI FOR ALL STRUCTURAL FLEMENTS (INCLUDING BUT NOT LIMITED TO FOOTINGS, SLABS, BEAMS, COLUMNS) UNLESS, OTHERWISE NOTED ON THE STRUCTURAL PLANS. SLABS ON GRADE SHALL BE PERMITTED TO BE POURED WITH 2500 PSI CONCRETE.

SLABS ON GRADE SHALL BE REINFORCED WITH WELDED WIRE FABRIC: SHALL COMPLY WITH ASTM A-185. FABRIC SHALL BE PLACED ¹/₂ FROM THE TOP OF THE SLAB. LAPS SHALL BE 6" MIN. WWM SHALL BE OVERLAPPED 30" AT PERIMETERS CONCRETE MIX SUBMITTALS SHALL DESCRIBE WHICH LOCATION IN THE STRUCTURE THE MIX IS TO BE PLACED.

CONCRETE PLACEMENT

ACI347.2R-10, 4.5: NO WORKER SHALL BE ALLOWED DIRECTLY UNDER THE FORMS DURING CONCRETE PLACEMENT. CURING AGENTS USED ON ROOFS SHALL BE CHECKED FOR COMPATIBILITY WITH ROOFING MATERIALS.

CONCRETE TIE BEAM

GENERAL CONTRACTOR IS TO VERIFY BEAM DEPTH & ELEVATIONS WITH ARCHITECTURAL PLANS & NOTIFY ARCHITECT OF ANY DISCREPANCIES. COORDINATE MASONRY OPENINGS WITH WINDOW MANUFACTURER & ΝΟΑ FOR ARCHED BEAMS ADD (2) # 5'S DIAGONAL EACH END OF THE BEAM. ADD (1) EXTRA #5 DIAGONAL EACH SIDE FOR EVERY 4" EXTRA WIDTH

BEAM DEPTHS ARE MINIMUM REQUIRED, ADD 2#5 MIDDLE FOR EVERY ADDITIONAL 12" OF DEPTH REQUIRED TYPICAL TIE BEAM OVER WALLS TO BE (PER FBC 2121.2.3.2) 8"x12" w/ (2) #5's TOP AND BOTTOM. (4) #3 TIES @ EACH SIDE OF EVERY BEND, CORNER AND TRANSITION. TIE BALANCE @48" O/C. TIE BEAM DROPS DOWN TO TOP OF OPENING - SEE FRAMING PLANS. FOR WIDER THAN 8" TIE BEAMS, INCREASE TOP AND BOTTOM LONGITUDINAL STEEL BY (1) # 5 PER EXTRA 4" OF WIDTH

"PCL" REFERS TO PRECAST LINTEL MANUFACTURED BY CASTCRETE WITH NOA # 14-0903.03. USE 12" WIDE LINTEL FOR 12" THICK WALLS TIES AT INTERMEDIATE AND END SUPPORT SPACING REFERS TO TIES TO EACH SIDE OF EACH INTERMEDIATE COLUMN OR WALL SUPPORT BALANCE REFERS TO THE SPACING OF THE REMAINING TIES AFTER THE TIES AT EACH FND HAVE BEEN INSTALLED. IF NO END TIES SHOWN, USE BALANCE THROUGHOUT THE ENTIRE LENGTH OF THE BEAM. GC TO VERIFY DEPTH OF BEAMS WITH WINDOW AND DOOR HEIGHTS. COORDINATE WITH GLAZING

MANUFACTURER WHEN THE BEAM SPECIFIED IN THE STRUCTURAL PLAN RUNS OVER A CMU WALL, IT'S ACTUAL WIDTH IS TO BE THE ACTUAL WIDTH OF THE WALL, WHICH WOULD BE 7-5/8" OVER 8" CMU.

BOND BEAM GENERAL CONTRACTOR IS TO VERIFY BEAM DEPTH & ELEVATIONS WITH ARCHITECTURAL PLANS & NOTIFY ARCHITECT OF ANY DISCREPANCIES. COORDINATE MASONRY OPENINGS WITH WINDOW MANUFACTURER &

FOR ARCHED BEAMS ADD (2) # 5'S DIAGONAL EACH END OF THE BEAM. ADD (1) EXTRA #5 DIAGONAL EACH SIDE FOR EVERY 4" EXTRA WIDTH. BEAM DEPTHS ARE MINIMUM REQUIRED, ADD 2#5 MIDDLE FOR EVERY ADDITIONAL 12" OF DEPTH REQUIRED

TYPICAL BOND BEAM OVER WALLS TO BE (2) COURSES OF 8x8 KNOCK OUT BLOCK WITH LONGITUDINAL CONTINUOUS IN EACH COURSE. LAPS TO BE 30". USE (2) #5x30"x30" CORNER BARS AT EVERY CORNER, T-INTERSECTION OR VERTICAL TRANSITION FOR 12" AND 16" WIDE TIE BEAMS, INCREASE TOP AND BOTTOM LONGITUDINAL STEEL TO (3) # 5

"PCL" REFERS TO PRECAST LINTEL MANUFACTURED BY CASTCRETE WITH NOA # 14-0903.03. USE 12" WIDE LINTEL FOR 12" THICK WALLS TIES AT INTERMEDIATE AND END SUPPORT SPACING REFERS TO TIES TO EACH SIDE OF EACH INTERMEDIATE COLUMN OR WALL SUPPORT BALANCE REFERS TO THE SPACING OF THE REMAINING TIES AFTER THE TIES AT EACH END HAVE BEEN INSTALLED.IF NO END TIES SHOWN, USE BALANCE THROUGHOUT THE ENTIRE LENGTH OF THE BEAM. GC TO VERIFY DEPTH OF BEAMS WITH WINDOW AND DOOR HEIGHTS. COORDINATE WITH GLAZING MANUFACTURER

CONCRETE TESTING QUALIFIED FIELD TESTING TECHNICIANS SHALL PREPARE SPECIMENS REQUIRED FOR CURING UNDER FIELD CONDITIONS AND RECORD THE TEMPERATURE OF THE FRESH CONCRETE WHEN PREPARING SPECIMENS FOR LABORATORY STRENGTH TESTS.

ACCOUNTING SEPARATELY FOR EACH CLASS OF CONCRETE AND EACH DAY, ONE TEST (CONSISTING OF BREAKING (2) 6"Ø DIAMETER x 12" HIGH CONCRETE CYLINDER SAMPLES, MOLDED AS PER ASTM C31 AND TESTED PER ASTM C39) SHALL BE PERFORMED ACCORDING TO THE MOST FREQUENT OF: ONCE A DAY

ONCE EVERY 150 CUBIC YARDS ONCE EVERY 5000 SQUARE FEET OF SLAB OR WALL SURFACE AREA

7 DAY, 14 DAY AND 28 DAY TEST REPORTS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW. THE CLIENT SHALL RETAIN A REPUTABLE TESTING COMPANY TO BE ON SITE AT THE TIME OF CONCRETE POUR AND INDEPENDENTLY COLLECT CYLINDERS AND PERFORM COMPRESSIVE TESTING.

IF LESS THAN 50 CUBIC YARDS ARE USED FOR A SINGLE CLASS OF CONCRETE, TESTING IS NOT REQUIRED IF SUFFICIENT EVIDENCE IS PROVIDED TO THE BUILDING OFFICIAL.

CONCRETE REINFORCEMENT (ACI 318-11, 315, LRFD) TEMPERATURE REINFORCEMENT IN STRUCTURAL SLABS SHALL BE INSTALLED CONTINUOUSLY (WITHOUT BREAKS OR INTERRUPTIONS) IN ALL AREAS OF THE SLAB AND RUNS PERPENDICULAR TO THE MAIN REINFORCEMENT. OVERLAP TEMPERATURE BARS WHERE NEEDED A MIN OF 24"

CONCRETE REINFORCEMENT BARS, STIRRUPS AND TIES SHALL BE IN ACCORDANCE WITH ASTM A-615 (GRADE 60). REINFORCING BARS THAT ACT AS LAP DOWELS AND ARE TO BE WELDED TO STRUCTURAL STEEL SHALL CONFORM TO ASTM A-706 (GRADE 60). REINFORCING BARS CONTAINING A LIGHT COAT OF RUST SHALL BE

ACI HOOKS TO BE PROVIDED FOR ALL REQUIRED CONDITIONS PER DETAILS PRESENTED IN THIS PROJECT. FIELD WATER IS NOT PERMITTED TO BE ADDED TO THE CONCRETE MIX.

ALL EXTERIOR SLAB REBAR SHALL BE SEPARATED BY PLASTIC CHAIRS FROM ANY CONCRETE FACES. WELDED REINFORCEMENT SHALL CONFORM TO AWS D1.4 OR BE ASTM A706 GRADE 60.

ANCHOR EMBEDMENT LENGTH INCLUDE STRUCTURAL CONCRETE ONLY (DOES NOT INCLUDE STUCCO). ALL CONCRETE SURFACES TO BE KEPT IN A MOIST CONDITION FOR 7 DAYS AFTER POUR. CONCRETE COVER SHOULD BE AS FOLLOWS UNLESS NOTED OTHERWISE:

CONCRETE PLACED DIRECTLY IN CONTACT WITH GROUND:

ALL BAR SIZES FACE OF CONCRETE ELEMENT EXPOSED TO WEATHER OR GROUND AFTER FORM REMOVAL: **#5 BARS OR SMALLER** 1-1/2"

ALL OTHER BAR SIZES FACE OF CONCRETE ELEMENT NOT EXPOSED TO WEATHER OR GROUND SLABS, CAST IN PLACE WALLS $\frac{3}{4}$ " BEAMS AND COLUMNS

COLUMN AND FILLED CELL LAP SPLICES SHALL BE 48 BAR DIAMETERS. THE CONTRACTOR SHALL ALLOW FOR AN ADDITIONAL 1% AMOUNT OF REBAR TO BE USED AT THE DISCRETION

OF THE STRUCTURAL INSPECTOR IN ORDER TO RECTIFY OR STRENGTHEN ANY CONDITIONS FOUND TO BE CRITICAL DURING CONSTRUCTION.

ALL OTHER TRADES PLANS SHALL BE VERIFIED TO IDENTIFY THE LOCATION OF DEPRESSIONS, RECESSES, PIPES, PENETRATIONS, SLEEVES, ETC.

ALL FRESH CONCRETE TO EXISTING CONCRETE CONTACT FACES SHALL HAVE AN APPROVED FRESH CONCRETE EPOXY BONDING AGENT APPLIED AS PER THE MANUFACTURER'S SPECIFICATIONS.

ALL FORMS SHALL BE CLEANED WITH COMPRESSED AIR IN ORDER TO REMOVE ANY DIRT, LAITANCE, DEBRIS,

ETC, PRIOR TO THE PLACEMENT OF ANY CONCRETE. ANCHORING SPECIFICATIONS CONCRETE SCREWS SHALL BE HILTI KWIK-CON II (NOA#12-0625.05)

EPOXY SPECIFICATIONS

EPOXY SHALL BE HILTI HIT HY 150 MAX.

INSTALL ACCORDING TO THE MANUFACTURING SPECIFICATIONS USING THE CORRECT DRILL BIT DIAMETER, AIR BLOWER AND BRUSH IN THE RECOMMENDED SEQUENCE AND REPETITION. INSTALL EPOXY ANCHORS AFTER ACHIEVING THE SPECIFIED COMPRESSIVE STRENGTH

NOMINAL AND TRUE THICKNESS MEMBERS

THE FOLLOWING ARE MEMBERS IN WHICH THE NOTED THICKNESS AND WIDTH IN PLAN AND SCHEDULE IS INTENDED TO BE THE EXACT MEASUREMENT OF THE ACTUAL BUILT MEMBERS. ALL CONCRETE SLABS

- INTERIOR CONCRETE BEAMS AND COLUMNS
- FOOTINGS, GRADE BEAMS AND PILES STRUCTURAL STEEL MEMBERS (COLUMNS, BEAMS AND CONNECTION MEMBERS)

THE FOLLOWING MEMBERS HAVE THEIR NOMINAL DIMENSIONS NOTED AND THE ACTUAL DIMENSION VARIES: CONCRETE COLUMNS AND TIE BEAMS IN-LINE WITH MASONRY WALLS, WHERE THE COLUMN THICKNESS SHALL MATCH THE WALL NET THICKNESS.

CONSTRUCTION JOINTS

A CONTROL AND CONSTRUCTION JOINT LAYOUT SHALL BE PROPOSED BY THE GENERAL CONTRACTOR FOR REVIEW BY THIS OFFICE. ALL INTERMEDIATE STEEL COLUMNS SHALL BE ISOLATED BY JOINTS AS DEPICTED BY THE INCLUDED DETAIL IN THIS SET OF DRAWINGS. THE WIDTH OR LENGTH OF SLAB PANELS (DELIMITED JOINTS) SHALL BE WITHIN THE RANGE OF 24 TO 36 TIMES THE THICKNESS OF THE CONCRETE SLAB.

DRAINAGE ALL EXTERIOR FLAT SURFACES SHALL BE SLOPED TO DRAINS AS SHOWN IN THE ARCHITECTURAL DRAWINGS. ALL ELEVATED ENCLOSED SURFACES SHALL BE PROVIDED WITH SCUPPERS PER ARCHITECTURALS.

STRUCTURAL STEEL (AISC LRFD)

CONTRACTOR SHALL RETAIN A STRUCTURAL STEEL FABRICATOR THAT WILL MODEL THE STEEL MEMBERS. THEIR GEOMETRY AND THE CONNECTIONS BETWEEN EACH IN ORDER IN A 3D STRUCTURAL STEEL DETAILING PROGRAM IN ORDER TO GENERATE SHOP DRAWINGS SHOWING THE CONNECTIONS TO SCALE. THESE SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL TO THIS OFFICE PRIOR TO FABRICATION.

ALL STRUCTURAL STEEL SHALL COMPLY WITH AISC LRFD 13TH EDITION. STEEL BEAMS, C-CHANNELS AND MC-CHANNELS SHALL COMPLY WITH ASTM A992 (GRADE 50). STEEL RECTANGULAR / SQUARE COLUMN SECTIONS - ASTM A-500 (Fy=46 KSI), GRADE B.

STEEL CIRCULAR COLUMN SECTIONS - ASTM A-500 (Fy=42 KSI), GRADE B. STEEL ANGLES AND S-SHAPES SHALL CONFORM TO ASTM A36. ALL STEEL BOLTS AND THREADED RODS, UNLESS NOTED OTHERWISE ON THE PLANS TO BE ASTM A307, GRADE A AND INSTALLED TO A SNUG TIGHT CONDITION (DEFINED AS BEING TIGHTENED BY THE FULL EFFORT OF A WORKER USING A REGULAR SPUD WRENCH). BOLT NUTS TO BE ASTM A563.

ALL STRUCTURAL STEEL (NOT INCLUDING REBAR) TO HAVE A SHOP COAT OF RUST INHIBITIVE PAINT. AFTER INSTALLATION A FIELD TOUCH UP SHALL BE APPLIED. UNLESS THE JOBSITE IS FURTHER THAN 2 MILES FROM THE OCEAN, ANY STRUCTURAL STEEL THAT IS TO BE

EXTERIOR TO THE BUILDING ENVELOPE SHALL BE HOT DIP GALVANIZED. ALL SHEAR STUDS SHALL BE TYPE B, ASTM A108 (Fu = 65 ksi) ALL CABLES SHALL BE STAINLESS STEEL 6x19 WIRE ROPE - TYPE 304, IN COMPLIANCE WITH ASCE19-10 PROVISIONS.

DO NOT CUT THE TOP STEEL PLATES IN ORDER TO ALLOW CONCRETE FROM THE TIE BEAM TO FILL THE STEEL COLUMN. IF CONCRETE FILLED STEEL COLUMNS ARE REQUIRED BY THE STEEL COLUMN SCHEDULE OR THE ARCHITECT, THEY SHALL BE FILLED IN THE FABRICATING SHOP PRIOR TO PLATE WELDING.

ALL SHOP AND FIELD WELDING SHALL BE PERFORMED BY WELDERS QUALIFIED, AS DESCRIBED IN "AMERICAN WELDING SOCIETY'S STANDARD QUALIFICATION PROCEDURE" (ASW D1.1), TO PERFORM THE TYPE OF WORK

REQUIRED. ALL STEEL WELDING RODS SHALL BE E70XX ELECTRODES. ALL STEEL BEAM CONNECTIONS ARE INTENDED TO SIT DIRECTLY ON TOP OF TOP PLATES OF HOLLOW STEEL

TUBE COLUMNS (NOT TO THE SIDE OF STEEL TUBE COLUMNS). DO NOT CUT TOP PLATES OF STEEL COLUMNS TO BE FILLED WITH GROUT

ALL STEEL BEAMS CONNECTIONS TO EMBED PLATES ON CONCRETE SHALL BE DONE AFTER CONCRETE HAS REACHED 70% OF THE SPECIFIED COMPRESSIVE STRENGTH (VERIFY WITH THE 7 DAY CONCRETE SPECIMEN BREAK RESULTS)

DO NOT CUT THE HEADS OR NUTS OF ANY BOLTS THAT PROTRUDE PAST THE STEEL PLATES OF STEEL BUCKETS WITHOUT PRIOR CONSULTATION WITH THIS OFFICE.

ALTERATIONS, ADDITIONS AND RENOVATIONS: PROJECTS OF THIS NATURE HAVE BEEN DESIGNED TO THE BEST OF KNOWLEDGE OF THIS OFFICE WITH RESPECT TO THE EXISTENCE, LOCATION AND CONDITION OF ANY EXISTING STRUCTURAL ELEMENTS. IN CASE

OF ANY DISCREPANCIES BETWEEN THESE ASSUMPTIONS AND THE ACTUAL CONDITIONS DISCOVERED DURING CONSTRUCTION, NOTIFY THIS OFFICE FOR EXISTING CONDITIONS ANALYSIS AND DESIGN ADJUSTMENTS. DIMENSIONS OF EXISTING STRUCTURES SHALL BE FIELD VERIFIED TO BE COMPATIBLE WITH PROPOSED WORK.

NO EXISTING STRUCTURAL ELEMENTS MAY BE CUT WITHOUT PRIOR AUTHORIZATION FROM THIS OFFICE. DO NOT CUT TRENCHES IN EXISTING FLOOR SLAB WITHOUT PRIOR CONSULTATION WITH THIS OFFICE. IF EXISTING STRUCTURAL ELEMENTS ARE BEING MODIFIED, CONTRACTOR MUST SECURELY PROVIDE

TEMPORARY SUPPORT PRIOR TO DEMOLITION, CONTRACTOR MUST HIRE THE SERVICES OF A SPECIALTY RE-SHORING ENGINEER IN THE CASE OF MAJOR ALTERATIONS THAT ESCAPE STANDARD SHORING PRACTICES.

EXPANSION BOLTS SHALL HAVE A LENGTH IDENTIFYING LABEL AND BE HILTI KWIK BOLT 3 OR EQUAL

MASONRY (TMS402-11/ACI 530/ASCE 5, ASD) THIS PROJECT IS DESIGNED AS ENGINEERED UNIT MASONRY. STRUCTURAL DESIGN SHALL BE IN ACCORDANCE WITH ACI 530/ASCE 5/TMS 402-11, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES AND THE COMMENTARY ON BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

MASONRY UNITS SHALL BE ASTM C-90 TYPE II WITH MINIMUM COMPRESSIVE STRENGTH OF 1900 PSI ON NET AREA OF INDIVIDUAL UNITS PER FBCR 606.4. ALL CMU SHALL BE LAID IN A FULL BED OF MORTAR IN RUNNING BOND U.O.N. ALL REINFORCING STEEL SHALL BE MANUFACTURED FROM HIGH STRENGTH BILLET STEEL CONFORMING TO ASTM DESIGNATION A-615 GRADE 60. ALL CMU WALL UNDERGROUND SHOULD BE SOLID GROUTED

ALL MORTAR SHALL BE TYPE S IN ACCORDANCE WITH ASTM SPECIFICATION C-270 WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI AT 28 DAYS. NO TESTING FOR MORTAR STRENGTH IS REQUIRED FOR THIS PROJECT. MORTAR MAY BE RE-TEMPERED WITH WATER TO REGAIN WORKABILITY FOR NO MORE THAN 2.5 HOURS AFTER INITIAL MIXING. GROUT SHALL BE A HIGH SLUMP MIX (8"-11") IN ACCORDANCE WITH ASTM SPECIFICATION C-476 HAVING A MINIMUM

PROVIDE 9 GAUGE HORIZONTAL JOINT REINFORCEMENT (LADDER TYPE ONLY) AT EVERY SECOND COURSE FOR ALL EXTERIOR WALLS. THIS REINFORCEMENT SHALL EXTEND MIN 4" INTO ALL CONCRETE COLUMNS

IN THE HIGH VELOCITY HURRICANE ZONE (BROWARD AND DADE COUNTIES) ALL CONCRETE MASONRY, TIE BEAMS, TIE COLUMNS, ETC SHALL BE INSPECTED BY A REGISTERED ENGINEER BEFORE CONCRETE POUR. UPON INSPECTION APPROVAL, AN ENGINEERING SIGNED, SEALED AND DATED LETTER WILL BE PROVIDED TO THE GENERAL CONTRACTOR AS REQUIRED BY THE AHJ. NO PIPES OR CONDUITS ARE ALLOWED IN MASONRY CELLS CONTAINING A REINFORCING BAR.

IN THE HIGH VELOCITY HURRICANE ZONE (BROWARD AND DADE COUNTIES) FOR REINFORCED UNIT MASONRY, MANDATORY INSPECTION REQUIRES A LEVEL B QUALITY ASSURANCE PROGRAM AS DESCRIBED BY MSJC TABLE 4, WHICH STATES THE GENERAL CONTRACTOR SHALL PROVIDE TO THE INSPECTOR CERTIFICATES OF MATERIALS USED IN MASONRY CONSTRUCTION, SUCH AS MASONRY BLOCK COMPLYING WITH ASTM C90, THE MINIMUM NET COMPRESSIVE BLOCK STRENGTH OF 1900PSI AND THE GRADE OF STEEL DEFORMED REINFORCEMENT TO BE ASTM A615. THE SPECIAL INSPECTOR SHALL VERIFY GROUT SPACES, LADDER TYPE REINFORCEMENT, REINFORCEMENT DIAMETER AND LOCATIONS FOR WALLS, TIE BEAMS AND CONCRETE COLUMNS.

SHOP DRAWINGS

COMPRESSIVE STRENGTH OF 3000 PSI.

FLOOR AND ROOF SYSTEM SHOP DRAWINGS WILL NOT BE STAMPED UNTIL THE FOLLOWING PARTIES HAVE STAMPED GENERAL CONTRACTOR HAS VERIFIED: -FIELD DIMENSIONS

- -AS BUILT VARIATIONS WHICH MAY AFFECT CONNECTION DETAILS -GENERAL COMPLIANCE WITH THE APPROVED PLANS
- ARCHITECT HAS VERIFIED: -INTERFERENCE BETWEEN THE SHOP DRAWING ELEMENTS AND CEILING HEIGHTS, COFFERS, VAULTS AND ANY OTHER GEOMETRICAL CEILING FEATURES. -LENGTH OF OVERHANG, RIDGE LINES AND ROOF PITCH -MINIMUM AREAS DESIGNATED FOR STORAGE SPACES.

GENERAL CONTRACTOR TO PROVIDE THIS OFFICE WITH SHOP DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY THE DELEGATED ENGINEER FOR APPROVAL. CONTRACTOR TO ANTICIPATE FOR TIME OF REVIEW, ADJUSTMENT AND RESUBMITTAL. SAID DRAWINGS SHALL BE ENGINEERED TO COMPLY WITH THE DESIGN PARAMETERS SPECIFIED IN THESE PLANS BUT IN NO CASE LESS THAN THE MINIMUMS REQUIRED BY THE ABOVE MENTIONED CODES. DESIGN PARAMETERS USED AND ALL LOADS FROM SPECIALTY MEMBERS ACTING AGAINST THE SUBSTRUCTURE SHALL BE CLEARLY IDENTIFIED IN THE REVIEW PACKAGE

STEEL ROOF DECK

-EXTERIOR WALL RECESSES

ACCORDANCE WITH THE SJI SPECIFICATION.

SIDELAPS SHALL CONSIST OF A MINIMUM OF 2" THIS PROVIDES 1" MIN EDGE DISTANCE TO SIDELAP FASTENERS. ROOF STEEL DECK TO BE G-90 GALVANIZED AND SHALL BE AS SHOWN THE ON ROOF PLANS. MANUFACTURER SHALL BE A MEMBER OF THE STEEL DECK INSTITUTE. ALL ROOF DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE

ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS FOLLOWING AWS D1.3 PROCEDURE. WELDING WASHERS ARE TO BE USED ON ALL CONNECTIONS OF STEEL DECK WITH METAL THICKNESS THINNER THAN 22 GA. TO STRUCTURAL STEEL SUPPORTS.

PROVIDE [%]/₈" PUDDLE WELDS AT 5" O/C ALONG DIAPHRAGM PERIMETER EDGE SUPPORT.

STEEL JOISTS ALL JOISTS SHALL HAVE A SHOP COAT OF RUST INHIBITIVE NON-BITUMINOUS PAINT. DELEGATED ENGINEER TO DESIGN ROOF JOISTS FOR A NET UPLIFT LOAD OF 35 PSF.

ALL BRIDGING TO BE SPECIFIED AND PROVIDED BY DELEGATED ENGINEER. BRIDGING ATTACHMENT TO STRUCTURE SHALL BE AS DETAILED BY THE ENGINEER OF RECORD. K SERIES JOISTS SHALL BEAR 4" OVER A STEEL EMBED PLATE SUPPORTED BY A CMU OR CONCRETE WALL. K SERIES JOISTS SHALL BEAR 2.5" OVER STEEL BEAMS LH SERIES JOISTS SHALL BEAR 6" OVER A STEEL EMBED PLATE SUPPORTED BY A CMU OR CONCRETE WALL. LH SERIES JOISTS SHALL BEAR 4" OVER STEEL BEAMS.

BOTTOM CHORD BRIDGING SHALL BE PROVIDED TO ALL JOISTS (COMPOSITE, NON-COMPOSITE, ROOF AND FLOOR) IN

ABBREVIATION LEGEND: - LONG WAY LRFD - ADDITIONAL - ANCHOR BOLT LLBB - AMERICAN CONCRETE INSTITUTE BACK - AMERICAN IRON AND STEEL INSTITUTE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MCJ - ALUMINUM MFR - ALLOWABLE STRESS DESIGN MIN - BALANCE, REMAINING BAL MID - BASE PLATE MISC BOT - BOTTOM NTS CANT - CANTILEVERED O/C CIP - CAST IN PLACE CL - CENTER LINE CLG CLR - CEILING - CLEAR PSF CONC - CONCRETE COL - COLUMN - CONTROL JOINT / CONSTRUCTION JOINT CJ CONN. - CONNECTION - CONCRETE MASONRY UNIT CMU REINF DBA - DEFORMED BAR ANCHOR SDS DET - DETAIL STD - DEAD LOAD - DIAMETER DIM - DIMENTION - EACH SJI - EACH END E.E. SDI E.W. - EACH WAY SW EWTB - EACH WAY, TOP AND BOTTOM SW - EACH FACE TON - EXPANSION JOINT EJ TYP - FLORIDA BUILDING CODE FBC - FINISHED STRUCTURAL FLOOR ELEVATION FR - FINISHED STRUCTURAL ROOF FNDN - FOUNDATION ARE FRMNG - FRAMING TS ELEVATION

- GAUGE - GENERAL CONTRACTOR - HEADED STUD / NELSON STUD - HOLLOWCORE - HOT DIPPED GALVANIZED - HOLLOW STRUCTURAL SECTION - 1000 PER LINEAR FOOT - KNOCK-OUT - 1000 LB PER SQUARE INCH KSI

- FOOTING

FTG

- LOAD AND RESISTANCE FACTOR DESIGN - LIVE LOAD - STEEL ANGLES WITH LONG LEGS BACK TO MASONRY CONTROL JOINT - MASONRY OPENING - MANUFACTURER - MINIMUM - MIDDI F - MISCELLANEOUS - NOT TO SCALE - ON CENTER SPACING - OUTSIDE DIAMETER - PRESSURE TREATED WOOD - 1 LB PER SQUARE INCH **1 LB PER SQUARE FOOT** - 1 LB PER LINEAR FOOT - PLATE - RING SHANK NAIL - REINFORCED CONCRETE - REINFORCEMENT - SELF DRILLING SCREW - STANDARD SLBB - STEEL ANGLES WITH SHORT LEGS BACK TO SCHED-SCHEDULE - STEEL JOIST INSTITUTE - STEEL DECK INSTITUTE - SHEAR WALL - SHORT WAY - 2000 LB - TYPICAL - MEMBER'S TOP ELEVATION T/STRUCTURE - THE TOP ELEVATION OF THE CONCRETE SLAB, BEAM OR PLYWOOD. ARCHITECTURAL FINISHES APPLIED ABOVE THIS ELEVATION. - TUBE STEEL (HOLLOW STRUCTURAL SECTION) - TOP OF SLAB TOB - TOP OF BEAM - UNLESS NOTED OTHERWISE UNO - UPLIFT VALUE IN LB VERT - VERTICAL - VERIFY IN FIELD

- VAPOR BARRIER

- WELDED WIRE FABRIC

- WITH

1 KIP - 1000 LB

- DIAMETER

WWF

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